



## ACCOUNTING ISSUES IN THE DIGITAL ECONOMY

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### Abstract

About the Author Patricia (Pat) Meredith is a CIGI senior fellow and a global thought leader, award-winning author, and consultant in the emerging field of strategic governance. Pat is the director of many public, private, and not-for-profit organizations. She was executive vice president, chief strategy officer of a major financial institution, and senior strategy adviser to financial services and technology companies for a global strategy consultancy.

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Pat has written three books on strategy and governance: *Stumbling Giants: Transforming Canada's Banks for the Information Age* (coauthored with James L. Darroch, 2017), which won the Donner Prize for best public policy book of the Year; *Catalytic Governance: Leading Change in the Information Age* (2016); and *Better Boardrooms: Repairing Corporate Governance for the 21st Century* (2020). From 2010 to 2012, Pat chaired Canada's Task Force for the Payments System Review. The task force, which applied a catalytic governance process, delivered a community-supported action plan that enabled government and industry to quickly act on all four of the recommendations. With her Catalytic Governance co-authors, Steven A. Rosell and Ged R. Davis, she is working to create a community of leaders developing better approaches to governing in the information age. Pat has a Ph.D. in business strategy, an M.B.A. in management information systems and a B.Math. She is a fellow of the Institute of Chartered Professional Accountants of Ontario and the David and Sharon Johnston Centre for Corporate Governance Innovation at the University of Toronto's Rotman School of Management. She teaches courses on strategy, uncertainty and governance to M.B.A. students and executives. Pat is chair of the Audit and Finance Committee of the Canadian Institute for Advanced Research.

**Executive Summary** The digital economy is being driven by investments in intangible assets, such as design branding and software, not by tangible assets, such as machinery, buildings and computers, of the industrial economy. However, accounting standards have not kept pace with the shift. They do not recognize investments in intangibles unless they are purchased from a third party. It is not that accountants do not know how to record these assets, as the methodology used to determine if purchased intangibles are impaired could be expanded to include internally manufactured assets. But doing so would require a change in mindset, from ensuring that in hindsight, assets were not overstated, to recognizing with foresight those assets likely to create future value for stakeholders. Shifting this mindset is much more difficult than changing accounting standards. History has demonstrated in previous economic revolutions that shifting mindsets and accounting standards is necessary to capture future economic prosperity. Without formal recognition of intangible assets and alignment of accounting with the new economic reality, it is difficult for lenders to make loans, for investors to make investments and for governments to tax value creation. The profession cannot accomplish such a massive task on its own. It needs active support from policymakers and regulators, investors, creditors, managers, and directors. It may also need a crisis response, such as mandated net-zero carbon emissions, to make the necessary changes.

**Introduction** Some prominent historians, notably Niall Ferguson (2018, 82–9), have argued that society would never have achieved the prosperity of the industrial age without the benefit of double-entry bookkeeping. But while the accounting system that requires equal and corresponding entries for every item may have been just the ticket for nineteenth-century factories and shops, it is ill-equipped for the knowledge-based businesses driving the digital economy. Double-entry bookkeeping, as it is still practiced today, cannot capture the intangible assets that drive all businesses, especially technology companies such as Facebook, Google, Microsoft, and Netflix. It does not give corporate leaders the real-time information they need to direct resources to the activities that society values most. Nor does it tell others with an interest in a company's success, such as employees, customers, suppliers, investors, and regulators, whether the business is creating or destroying value for them. Finally, it is not terribly helpful in managing future risks and uncertainties. If the accounting profession is to continue supporting economic prosperity and effective corporate governance in the information age, it must develop new tools better suited to our times. So far, it has lacked the mindset, training, and tax incentives to do so. Measuring intangibles would require new types of information, including non-financial information, for which there is currently little guidance or standards. Even if the profession develops these standards, it would not be enough. Today's users expect companies to shift their focus to long-term value creation for all stakeholders, rather than fixate on quarterly earnings and tomorrow's share price. The profession cannot accomplish such a massive task on its own. It needs active support from policymakers and regulators, investors, creditors, managers, and directors. A powerful force for change is emerging in the form of climate change. Existing accounting standards require companies to adjust their reporting to take account of new trends in society. The costs and benefits of net-zero climate emissions are an obvious candidates for inclusion. Such a change would force companies to develop strategies to deal with greenhouse gas emissions and to invest in technology, including intangible assets, to discharge their climate-change liabilities. Most companies would also want to recognize these investments, forcing the accounting profession to rethink its approach to recording intangible assets. This paper aims to explain why the information economy requires a new approach to accounting. It examines how the profession can reshape existing accounting standards to help fill the information gap while developing an entirely new approach to gathering and reporting financial and non-financial information. Finally, it recommends creating a coalition of stakeholders to chart the ways in which companies can create long-term value for all their stakeholders.

**The Information Economy Is Different** We have entered a technology-driven economic revolution. As Jonathan Haskel and Stian Westlake point out in their book, *Capitalism without Capital: The Rise of the Intangible Economy*, "Early in the 21st century, a quiet revolution occurred. For the first time, the major developed economies began to invest more in intangible assets, like design, branding, R&D [research and development], or software, than in tangible assets, like machinery, buildings, and computers. For all sorts of businesses,...the ability to deploy assets that one can neither see nor touch is increasingly the main source of long-term success" (Haskel and Westlake 2018, back cover of paperback edition). The intangibles economy is driven by ideas and information — in other words, intellectual property (IP). But intangibles encompass

far more than the trademarks, patents, and industrial designs that make up IP. They also comprise, for example, software, algorithms, customer data and relationships, goodwill, and brand recognition. Although share prices are far from the perfect measure of a company's value, recent trends in stock market valuations do indicate the magnitude of this shift. In 1975, intangible assets made up just one-sixth of the value of S&P 500 companies; today, they account for five-sixths of these companies' value (see Figure 1). While the combined market value of Alphabet, Amazon, Apple, Facebook and Microsoft is more than US\$9.5 trillion, their tangible assets add up to less than five percent of that figure.<sup>1</sup> The result is that conventional financial statements based on "book value," which is calculated on past transactions, now reflect less than 10 percent of a typical company's value. As Warren Buffet wrote in his 2019 letter to Berkshire Hathaway shareholders: "Long-time readers of our annual reports will have spotted the different way in which I opened this letter. For nearly three decades, the initial paragraph featured the percentage change in Berkshire's per-share book value. It's now time to abandon that practice. The fact is that the annual change in Berkshire's book value — which makes its farewell appearance on page 2 — is a metric that has lost the relevance it once had" (Buffet 2019, emphasis added). This is not the first time that Western capitalism has experienced such a shift, and each transition in the past has been accompanied by reforms in accounting theory and practice in response to the new environment. The first accounting revolution occurred in the fifteenth century when society moved from a closed agricultural economy to a dynamic trading regime. The mercantilist model spawned new forms of capital, such as letters of credit. Medieval bankers (the Medicis, for example), accountants, and investors reinvented themselves, creating a fresh suite of assets, such as inventories and receivables, with the help of the newly introduced concepts of Arabic numerals and double-entry bookkeeping (McGarvey 2016). Then came the Industrial Revolution, starting in the late eighteenth century.

Once again, the economy changed first, moving from home-based domestic manufacturing to a mechanical, factory-based industrial model. Soon, new institutional infrastructure emerged. Accountants created new asset classes in plant, equipment, and machinery (that remain to this day), as well as industrial-oriented cost-accounting standards and procedures. Similarly, bankers devised more advanced and efficient capital markets. Unfortunately, this financial reporting system, largely still in use today, does not reflect the value created (or destroyed) by the newly emerging class of intangible assets. It does not take into account the perspectives of stakeholders other than shareholders, nor does it provide the tools needed to allocate resources efficiently, or to manage uncertainty and risk. Accounting practices must adapt to provide this information so that everyone with a stake in the business's success can make wise decisions based on the best possible information. The good news is that one of the greatest challenges currently facing our planet — the climate crisis — could help trigger this badly needed shift.

Changing the Mindset Twenty years ago, at the turn of the twenty-first century, Wayne S. Upton, Jr., then chairman of the International Financial Reporting Standards (IFRS) Foundation's interpretations committee, famously said there is nothing new about the new economy. He went so far as to describe intangible assets as "old wine in new bottles" (Upton 2001). Accountants breathed a sigh of relief. Having emerged from the "dot.com" boom and bust, the Enron scandal and the demise of accounting giant Arthur Andersen, they figured they would have little trouble keeping abreast of the emerging digital economy by using the tried and trusted tools of double-entry bookkeeping. Alas, such optimism has turned out to be misplaced. As noted earlier, the corporate giants of the digital age, such as Amazon, Facebook, Google and Microsoft, have some tangible assets, but their business is dominated by intangibles, such as human creativity, artificial intelligence, software, and digital products and services, whose full value is not reflected in their financial statements. As we now know, the new bottles are, in fact, full of new wine that needs proper identification, bookkeeping and the same responsible stewardship as any other asset.

The International Accounting Standards<sup>2</sup> (IAS) framework, the set of rules that guides accountants around the world, defines an asset as "a resource with economic value that an individual, corporation, or country owns or controls in the expectation that it will provide a future benefit" (IAS 1). This definition clearly encompasses the intangible assets driving the information economy. Yet the application of this framework has not kept pace with the dramatic changes in the global economy over the past 20–30 years. The problem



is not that accountants do not know how to measure intangible assets. IAS 36 spells out an approach (known as value-in-use) to valuing purchased intangibles to determine whether they are impaired. Likewise, IAS 38 provides guidance on how to recognize internally generated intangible assets and how to revalue them in a few specific situations. The real problem is that accountants have an outdated view of economic reality. Rethinking Capital, a London, UK-based think tank, has been advising companies for the past 20 years on how to apply IAS 36 and 38, as well as the IFRS Foundation's conceptual framework to intangible assets.<sup>3</sup> It suggests using "normative" accounting rules. As described by Richard Mattessich in the 1950s, "normative accounting represents theories of accounting, often based on deductive logic and reasoning, that prescribe the accounting procedures and policies that should be followed rather than observing or describing those that are followed in practice" (Mattessich 1984). Using this normative approach, Rethinking Capital applies the following principles:

- Intangibles are the assets that create and sustain value in today's economy.
- Accounting practices systematically write off investments in intangible assets as expenses.
- Depending on company size, 40–60 percent of expenditures over a three-year period could typically have been capitalized.
- Current accounting practice therefore substantially understates a business's assets, equity and profitability.
- Properly capitalizing and reporting the current value of intangible assets based on actual customer demand will reflect their fair value.

Rethinking Capital has concluded that with a shift in mindset, accountants can use existing standards and conceptual frameworks to value intangible assets. Rather than using the IFRS's conservative "prudence" principle and IAS 36 and 38 only to write down impaired intangible assets, the profession can use the same value-in-use principles to recognize and continually revalue these assets. Since standards already exist for auditors using this methodology, it should not be difficult to extend them to cover intangible assets. The "prudent" mindset is reinforced by the Income Tax Act, which already encourages companies to write off the costs of creating intangible assets to reduce their tax bill. This approach is misguided because it reinforces the attitude that intangible assets have no value, when in fact they can be crucial for a company's growth and competitive advantage. Given the key role of innovation in driving economic growth, it would surely make sense to rewrite the rules to encourage recognition of intangible assets. Although Canada's national accounts record some intangible assets, a shift in accounting rules would provide a more accurate and favourable picture of the country's ability to manage its debt. Historically, accountants have managed to adjust their practices to accommodate shifting economic trends.

According to historian Ananias Charles Littleton (1933, 362), "Accounting originated in known circumstances in response to known needs; it has evolved and grown in harmony with its surroundings; its changes can be explained in terms of forces current at the time." The forces at work in 2021 are those driving the transition from the industrial economy of the nineteenth and twentieth centuries to a digital, knowledge-based economy. In other words, the time is ripe, if not overdue, for another series of adjustments. The question is how the profession can once again integrate the new economic environment with companies' record-keeping and operating systems. For a start, a good deal of training and retraining will be needed. The leaders of our profession would be wise to encourage colleagues to think differently about intangible assets and liabilities, in the process bringing a new lens to how companies create and commercialize these assets. This would be reinforced with the tax treatment. Given the importance of the global economy and the future of the accounting profession, it should not be difficult to make this adjustment. However, changing mindsets can be a frustrating and time-consuming process. Yet IAS 1 requires just that. According to this standard, if something is material, it must be disclosed. The 80–90 percent of value currently missing from most companies' financial statements thus surely deserves urgent attention from the profession, whether by adapting existing accounting standards or creating new ones. Using existing accounting standards to begin integrating information about intangible assets, while developing new approaches to gathering and

governing data and turning it into information for decision making using updated measurement and reporting standards, may be a good place to start.

Integrating Strategy and Accounting Capital markets have moved quickly to give intangible assets the recognition they deserve. According to McKinsey & Company, 60 percent of net new capital came from private equity funds in 2019.<sup>6</sup> Under the sway of strategy consultants and Harvard M.B.A.s, these investors have focused on the intrinsic value of their holdings by understanding a company's purpose, strategy and business model, and evaluating its underlying assumptions. They do so by relying increasingly on non-financial data to measure and evaluate future revenue streams. In part, this approach is designed to compensate for the shortcomings of traditional financial reporting. To remain relevant, accountants must create measurement and reporting standards for this new approach. Strategic modelling begins with a definition of strategy, described by Roger Martin, former dean of the University of Toronto's Rotman School of Management, as a "cascade of choices" (see Figure 2).<sup>7</sup> This approach assumes that "strategy is an integrated set of choices that uniquely positions the firm in its industry so as to create sustainable advantage and superior value relative to the competition" (Lafley and Martin 2013, 14). Martin argues in a 2020 Medium post that management systems, including performance metrics, are an important reality check on corporate strategy: A company needs management systems that build and maintain the distinctive capabilities that underpin a unique how to win in the chosen where to play that meets its winning aspiration. If a strategy does not have specific management systems that serve the purpose of building and maintaining distinctive capabilities, then those capabilities either won't get built in the first place or will deteriorate because they are not systematically maintained. Additionally, if the capabilities and management systems of an organization are entirely or nearly identical to those of competitors, its where-to-play and how-to-win choices will be replicated as soon as shown to be successful.

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